

Solve for x

$$\textcircled{1} \quad 2x - 1 = 0$$

$$\quad \quad +1 \quad +1$$

$$\frac{2}{2}x = \frac{1}{2}$$

$$\underline{x = \frac{1}{2}}$$

$$\textcircled{3} \quad x^2 + x - 2 = 0$$

$$\quad \quad \text{adv} \quad \text{mult}$$

$$\text{factor} (x+2)(x-1) = 0$$

$$\underline{x = -2, 1}$$

$$\textcircled{5} \quad \sqrt{x+4} = x+2$$

$$x+4 = (x+2)(x+2)$$

$$x^2 + 4x + 4 = x^2 + 4x + 4$$

$$x^2 + 3x = 0$$

$$x(x+3) = 0$$

$$\checkmark x = 0$$

$$\text{---} x = -3 \text{ extraneous}$$

$$\textcircled{6} \quad x + \sqrt{3} = \sqrt{1+x^2}$$

$$(x + \sqrt{3})(x + \sqrt{3}) = 1 + x^2$$

$$x^2 + 2\sqrt{3}x + 3 = 1 + x^2$$

$$\text{---} x^2 \quad \quad -1 \quad -1 \quad -x^2$$

$$2\sqrt{3}x + 2 = 0$$

$$2\sqrt{3}x = -2$$

$$\sqrt{3}x = -1$$

$$x = -\frac{1}{\sqrt{3}} \text{ or } \underline{\underline{-\frac{\sqrt{3}}{3}}}$$

$$\textcircled{2} \quad xy = x$$

$$\quad \quad -x \quad -x$$

$$xy - x = 0$$

$$x(y-1) = 0 \quad \boxed{x=0}$$

$$\textcircled{4} \quad x(x+3) = 1$$

$$x^2 + 3x - 1 = 0$$

$$\textcircled{6} \quad x + \sqrt{3} = \sqrt{1+x^2}$$

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

$$x = \frac{-3 \pm \sqrt{3^2 - 4(1)(-1)}}{2(1)}$$

$$x = \frac{-3 \pm \sqrt{13}}{2}$$

Solve for x

$$\textcircled{1} \quad x^2 + 5x + 6 = 0$$

$$\textcircled{2} \quad x^2 + 10x + 21 = 0$$

$$\textcircled{3} \quad x^2 - 5x - 14 = 0$$

$$\textcircled{4} \quad x^2 - x - 20 = 0$$

$$\textcircled{6} \quad 5x^2 - x = 0$$

$$\textcircled{7} \quad x^2 + 7x + 4 = 0$$

HW

Sect. 6.2

Read + understand

examples 1-5